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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/821,420

04/09/2004

Sitarama Penumetsa

SLA1507

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07/29/2008

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EXAMINER

JACKSON, BLANE J

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/821,420	Applicant(s) PENUMETSA, SITARAMA	
	Examiner Blane J. Jackson	Art Unit 2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 May 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9, 11-19 and 21-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 11-19, 21-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 July 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

The replacement drawings filed 24 July 2004 are accepted.

Claim Rejections - 35 USC § 102

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-9, 11-19 and 21-29 are rejected under 35 U.S.C. 102(e) as being anticipated by Wentink (US 2005/0036469).

As to claims 1, 8, 11 and 18, Wentink teaches a computer-readable medium for storing program data, wherein the program data comprises executable instructions for implementing a method in *a first (or second) wireless station* that is part of an infrastructure basic service set network, the infrastructure basic service set network also comprising an access point and a second wireless station, the wireless stations of the infrastructure basic service set network communicating on an infrastructure frequency channel (figures 1 and 3, paragraphs 0021, 0022 and 0026, switching between the parallel channel and the base channel is initiated by either wireless devices (102 and 104) using access point (106) of a LAN), the method comprising:

determining that at least one condition is satisfied for establishing a direct link with the second/ first wireless station for transmission of data from the first/second

wireless station to the second/ first wireless station (figure 4, paragraph 0034, the initiating wireless device may scan one or more potential channels for traffic),

establishing the direct link with the second wireless station on a direct link frequency channel that is different than the infrastructure frequency channel (figure 4, paragraphs 0034-0036, the access point may process the setup request frame as necessary and forward the setup request frame to the other wireless device to consider the proposal to establish a direct link on the proposed channel), and

transmitting the data to the second wireless station via the direct link (figure 4, paragraphs 0036-0040, the other wireless device (104) may transmit an affirmative setup response via the access point to the initiating or first wireless device (102), switch to the agreed to channel upon receipt of the setup confirm frame from the first wireless device and transmit an announcement from on the proposed channel directly to the initiating first wireless device to establish communication of information of the parallel channel via the direct link (110)).

As to claims 2 and 12 with respect to claims 1 and 11, Wentink teaches wherein after the data has been transmitted to the second wireless station the method further comprises terminating the direct link and rejoining the infrastructure basic service set network (paragraph 0044, the wireless devices may switch from the parallel channel to the base channel of the access point in anticipation of a predetermined event and remain on the base channel).

As to claims 3 and 13 with respect to claims 1 and 11, Wentink teaches wherein while the direct link is established between the first wireless station and the second wireless station the method further comprises periodically tuning to the infrastructure frequency channel to receive beacons from the access point (paragraphs 0029-0030, the wireless devices switch back to the access base channel to received the DTIM beacon frame).

As to claims 4 and 14 with respect to claims 3 and 13, Wentink teaches the method further comprises: receiving a beacon that comprises a notification about downlink data for the first wireless station that is buffered at the access point, determining whether a condition is satisfied for terminating the direct link, if the condition is satisfied, terminating the direct link and rejoining the infrastructure basic service set network if the condition is not satisfied, tuning to the infrastructure frequency channel at scheduled time intervals to receive the downlink data from the access point (paragraphs 0029-0031, the wireless devices periodically switch to the DTIM beacon frame to check for an indication of buffered information at the access node).

As to claims 5 and 15 with respect to claims 3 and 13, Wentink teaches wherein the method further comprises periodically tuning to the infrastructure frequency channel to receive every nth beacon and if the first wireless station does not see any buffered downlink data advertised in the beacons, increasing the value of n (paragraph 0030 and

0031, the process of switching between channels to check for buffered data may continue for any number of cycles as appropriate as controlled by the wireless devices).

As to claims 6 and 16 with respect to claims 1 and 11, Wentink teaches wherein the method further comprises obtaining unused frequency channels information about unused frequency channels near the first wireless station, sending the unused frequency channels information to the access point and receiving the direct link frequency channel from the access point (paragraph 0034, the initiating wireless device may scan one or more potential channels having relatively no traffic to include as the proposed channel in the channel information element of the setup request frame sent to the access point and transmitted to the second or other wireless device).

As to claims 7, 9, 17 and 19 with respect to claims 1, 8, 11 and 18, Wentink teaches determining that the at least one condition is satisfied for establishing the direct link comprises determining that the number of consecutive frames that have been generated at the first wireless station and that have a same destination address exceeds a threshold value and determining that the destination address is in the infrastructure basic service set network (paragraphs 0034-0036, the initiating wireless device, requiring a direct link with another wireless device, provides a setup request including indicators associated with the proposed channel via the access node to be considered by the receiving wireless device in establishing a direct link).

Claims 10, 20 and 30 are cancelled.

As to claims 21 and 28, Wentink teaches a *first/ second wireless station* that is configured to be part of an infrastructure basic service set network, the infrastructure basic service set network also comprising an access point and a *second/ first wireless station*, the wireless stations of the infrastructure basic service set network communicating on an infrastructure frequency channel, the first/ second wireless station (figures 1 and 3, paragraphs 0021, 0022 and 0026, switching between the parallel channel and the base channel is initiated by either wireless devices (102 and 104) using access point (106) of a LAN), *the first/ second wireless station comprising:*

a processor (figure 3, paragraphs 0032 and 0033, processor (306)),
memory in electronic communication with the processor (paragraph 0033),
instructions stored in the memory (paragraph 0033, MCDL implemented as a software component of the protocol stack (308) executed by the processor (306)), the instructions being executable to implement *a method comprising:*

determining that at least one condition is satisfied for establishing a direct link with the second/ first wireless station for transmission of data from the first/second wireless station to the second/ first wireless station (figure 4, paragraph 0034, the initiating wireless device may scan one or more potential channels for traffic),

establishing the direct link with the second wireless station on a direct link frequency channel that is different than the infrastructure frequency channel (figure 4, paragraphs 0034-0036, the access point may process the setup request frame as

necessary and forward the setup request frame to the other wireless device to consider the proposal to establish a direct link on the proposed channel), and

transmitting the data to the second wireless station via the direct link (figure 4, paragraphs 0036-0040, the other wireless device (104) may transmit an affirmative setup response via the access point to the initiating or first wireless device (102), switch to the agreed to channel upon receipt of the setup confirm frame from the first wireless device and transmit an announcement from on the proposed channel directly to the initiating first wireless device to establish communication of information of the parallel channel via the direct link (110)).

As to claims 22 with respect to claim 21, Wentink teaches wherein after the data has been transmitted to the second wireless station the method further comprises: terminating the direct link; and rejoining the infrastructure basic service set network (paragraph 0044, the wireless devices may switch from the parallel channel to the base channel of the access point in anticipation of a predetermined event and remain on the base channel).

As to claim 23 with respect to claim 21, Wentink teaches wherein while the direct link is established between the first wireless station and the second wireless station the method further comprises periodically tuning to the infrastructure frequency channel to receive beacons from the access point (paragraphs 0029-0030, the wireless devices switch back to the access base channel to received the DTIM beacon frame).

As to claim 24 with respect to claim 23, Wentink teaches the method further comprises: receiving a beacon that comprises a notification about downlink data for the first wireless station that is buffered at the access point, determining whether a condition is satisfied for terminating the direct link, if the condition is satisfied, terminating the direct link and rejoining the infrastructure basic service set network if the condition is not satisfied, tuning to the infrastructure frequency channel at scheduled time intervals to receive the downlink data from the access point (paragraphs 0029-0031, the wireless devices periodically switch to the DTIM beacon frame to check for an indication of buffered information at the access node).

As to claim 25 with respect to claim 23, Wentink teaches wherein the method further comprises periodically tuning to the infrastructure frequency channel to receive every nth beacon and if the first wireless station does not see any buffered downlink data advertised in the beacons, increasing the value of n (paragraph 0030 and 0031, the process of switching between channels to check for buffered data may continue for any number of cycles as appropriate as controlled by the wireless devices).

As to claim 26 with respect to claim 21, Wentink teaches wherein the method further comprises obtaining unused frequency channels information about unused frequency channels near the first wireless station, sending the unused frequency channels information to the access point and receiving the direct link frequency channel

from the access point (paragraph 0034, the initiating wireless device may scan one or more potential channels having relatively no traffic to include as the proposed channel in the channel information element of the setup request frame sent to the access point and transmitted to the second or other wireless device).

As to claims 27 and 29 with respect to claims 21 and 28, Wentink teaches determining that the at least one condition is satisfied for establishing the direct link comprises determining that the number of consecutive frames that have been generated at the first wireless station and that have a same destination address exceeds a threshold value and determining that the destination address is in the infrastructure basic service set network (paragraphs 0034-0036, the initiating wireless device, requiring a direct link with another wireless device, provides a setup request including indicators associated with the proposed channel via the access node to be considered by the receiving wireless device in establishing a direct link).

Conclusion

Reference the PTO-892 form for the prior art made of record and not relied upon but considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Blane J. Jackson whose telephone number is (571) 272-

Art Unit: 2618

7890. The examiner can normally be reached on Monday through Thursday, 8:30 AM-7:00 PM, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban can be reached on (571) 272-7899. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Blane J Jackson/
Primary Examiner, Art Unit 2618